of reports heard, lasting from 8:07 to 8:25 p. m. There was a slight trace of dust noticed falling at Basseterre, slightly more in Nevis, especially on the southeastern side about 15 miles from here, while in Montserrat enough fell to give a white appearance to the landscape. The dust cloud could be seen to the southeast and south, especially on the 2d of September. On the 3d of September the sunrise effect was very striking as the sun shone through the clouds of dust. There seem to have been an unusual number of days with light haze, but whether this was the effect of the dust clouds or the effect of aqueous vapor it is hard to decide. I am of the opinion that it was a combination of the two.

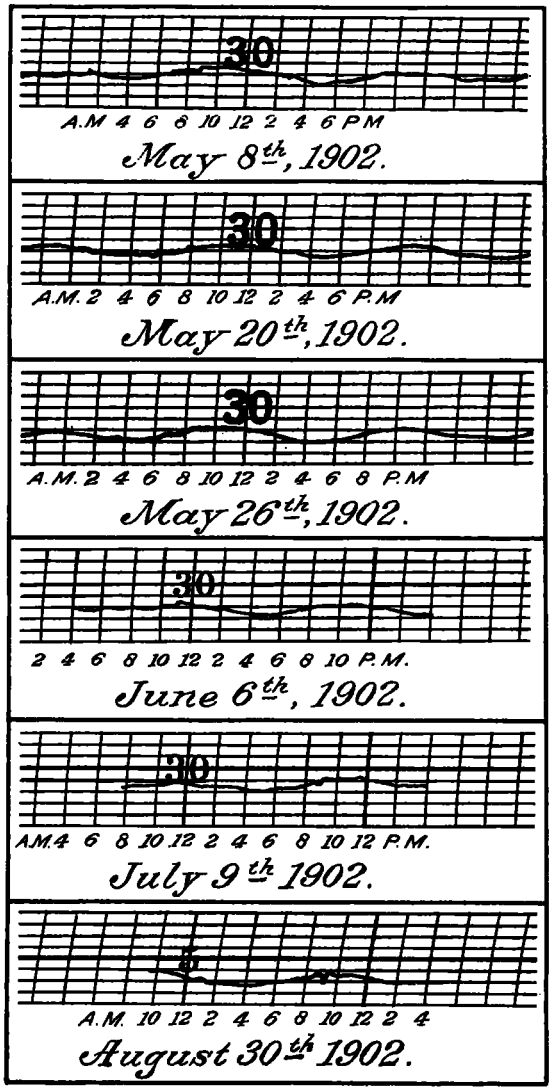

FIG. 1.

I have noticed that while the entire "hurricane season" has been marked by an almost entire absence of decided disturbances to the eastward, the direction of the upper clouds, when visible, has been continually shifting either to the northward or to the southward, usually the latter. The direction would swing around to about south-southeast and then return to normal. This has been repeated continually throughout the summer, occasionally varied by a swing through the northern quadrant.

It would appear as though there were some obstacle to the eastward which prevented the upper currents from flowing from that direction; may this not have been caused by the two columns of heated air rising from the scenes of the eruptions keeping the usual heated air layers stirred up and preventing the heated air from suddenly rising and thus starting a cyclonic disturbance?

I have also noticed that last summer (1901) the mercurial column in the sunshine recorder would often extend itself into the upper bulb, while this summer it has barely reached the contact wires on a great many days, especially in May, June, and July; even on clear days when no haze was visible this effect would be noticed.

I have the honor to enclose copies of the barograph sheets which were kindly loaned me by Mr. W. H. Porter, of Dominica, for the purpose of copying for the use of the Bureau. (See fig. 1.)

They are prints from photographic negatives taken from the original sheets on the days of the greatest eruptions and show quite distinctly the wave effect in the atmosphere.

San Juan.—Mr. E. C. Thompson, Section Director, San Juan, Porto Rico, W. I., reports that with the rainfalls of September 1 and 2 there fell an appreciable quantity of fine volcanic ashes at several stations on the island. One observer filtered 25 cuartillos of rain water and obtained about 5 gramos of ashes. This is supposed to have come from the eruption of August 30 on Martinique.

Turks Island.—Mr. D. Budge, General Station Superintendent for the Halifax and Bermuda Cable Company, at Halifax, N. S., writes: "Our agent at Turks Island reports that from the 29th of August to the 1st of September a heavy mist or haze has been observable around the island; it was so heavy on the 31st of August that the surrounding islands could barely be seen. The days were sunshiny and extremely hot. From what I hear it seems to be an unusual phenomenon here, and I report it as it may be of interest in view of the present volcanic eruptions in the West Indies."

Guatemala.—According to newspaper reports an eruption of the volcano Santa Maria in Guatemala began and continued until October 31 or later. This was a repetition of the eruptions in the same neighborhood in April and May. On October 26 there was a sudden and violent eruption of the volcano of Isalco 20 miles from Acajutla on the coast of San Salvador, after that volcano had been quiet for six months, but this eruption was short lived, whereas the flames, smoke, and ashes from Santa Maria produced widespread destruction. Santa Maria is between Retalhulen and Quezeltenango and in the neighborhood of the towns of San Felige, Mazatenango, and Quezeltenango; its latitude is north 15° and longitude west 92°. Mount Pelee, on Martinique, is in latitude north 14° 50′ and longitude 61° 20′ west. The latter is, therefore, nearly 2,000 miles east of Santa Maria. The smoke and ashes from Santa Maria spread northwestward over Guatemala and Mexico, while those from Pelee and Soufrière spread first southwest, with the lower northeast trades, then easterly with the upper winds and again southwest as they descended into the lower trade.

ROBERT RUBENSON.

We regret to announce the death of Prof. Dr. Robert Rubenson, Director of the Central Meteorological Institute of Sweden on October 14, 1902, after a long illness. Professor Rubenson was born April 10, 1829, and was the author of many works on the climatology of Sweden. Among his earliest memoirs was his investigation of the polarization of blue sky light, and one of his latest was the complete record of ancient observations of auroras in Sweden.

CORRIGENDA.

In September Review for 1902, page 447, column 2, lines 26 and 29 from bottom for "day" read "hour." Line 22 from bottom for "2" read "20." Line 21 from bottom for "1500" read "150."

THE WEATHER OF THE MONTH.

By W. B. STOCKMAN, Forecast Official, in charge of Division of Records and Meteorological Data.

CHARACTERISTICS OF THE WEATHER FOR OCTOBER.

The temperature was above normal in daily values of + 0.2° to + 3.4° in all of the geographical districts except the south Pacific, where the departure averaged 0.5° per day below normal.

The precipitation was in excess of the normal in the Atlantic and east Gulf States, North Dakota, and the middle slope and middle and south Pacific districts; in the remaining districts it was slightly deficient.

In the south Atlantic, Florida Peninsula, and southern slope districts the relative humidity was normal; below normal in New England, upper Lake, Plateau, and north Pacific districts, and above normal elsewhere.

The cloudiness was above the average in New England, south Atlantic, Florida Peninsula, east Gulf, lower Lake, middle slope,